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Produced by: Ian L. Bost, P.E.
Chapter Newsletter Editor/ Chairman

The Therm, is a monthly Newsletter for chapter members and HVAC&R professionals alike, that provides information about the Fort Worth Chapter of ASHRAE.

President's Message

Our meeting in September was another great event; Chris VanRite of M&M Manufacturing (right here in town) taught us all about the ASHRAE and Air Distribution Institute research that is being conducted on flexible ductwork. It was gratifying to see first-hand some of the benefits of the money we have raised for research. We had a total of 66 in attendance and continue to remain on track for a record high attendance for the last 10 years.

This month's meeting will be a special treat – Thomas Hartman will be presenting a discussion on relational HVAC control. Mr. Hartman is a world-renowned innovator of control strategies that consume the absolute lowest amount of energy possible. His strategies take advantage of variable-speed technologies (chillers, pumps, cooling tower fans, 2-way valves, etc.) to develop natural optimization curves for the system as a whole.

Our Fall Golf Tournament at Mansfield National Golf Course was a big hit again this year. We had 84 golfers in attendance and when all is said and done we will have raised about \$6,000 for research, putting us well on the way to our goal of \$29,000 for this year.

Last month we also had the privilege of accompanying the North Texas Association of Facility Engineers on their behind-the-scenes tour of Great Wolf Lodge indoor water park. We had a great time meeting the NTAFE folks and it was particularly interesting to learn how air turbines were controlled to generate different patterns in the wave pool.

We continue to make great strides towards the President's Award of Excellence (PAOE). 2,125 points have been gained to date, and we are about 25% of the way to our goal. This is due to the hard work of your chapter officers and committee chairmen.

Please don't forget that our November meeting (joint with BOMA) will not be on the third

Next Chapter Meeting

HVAC System Control for the 21st Century

October 21, 2009
11:30 A.M.

Carter::Burgess Plaza
777 Main St.
39th Floor
Fort Worth, TX

[Click here for map.](#)



Building Sustainability from the Inside Out

ASHRAE 2010 Winter Conference
Orlando, FL
January 23-27

President's Message - Cont.

Wednesday of that month, but rather on the first Tuesday (11/3). Victor Goldschmidt, an ASHRAE Distinguished Lecturer, will be presenting "Differing Perspectives into Global Warming." We expect to have 150+ people at this event, so be sure to RSVP when you receive the invitation!

We have partnered with Wells Fargo to host a financial planning night. The primary topic of discussion will be recovery from the current economic crisis. This event will take place on November 18th at 7pm on the 26th floor of 777 Main Street. Wells Fargo will be providing a meal and the discussion. You are encouraged to bring your spouse for this event, but we will need to know at least a week in advance that you plan to attend. Please RSVP to me at jay.martin@mail.ashrae.org

Please make an effort to reach out to others in our industry and invite them to come along to our meetings, especially when you see that the upcoming topic is something from which they can really benefit. I hope to see you next month!

Sincerely,

Jay Martin
Chapter President

September Program/Speaker Bio.

TOPIC OF DISCUSSION:

Relational Control" HVAC System Control for the 21st Century

The presentation outlines new airflow values derived from research which was co-funded by the Air Distribution Institute, ASHRAE and TXU and conducted at Texas A&M University Energy Systems Laboratory. Guidelines referencing these new values are appearing in ASHRAE Energy Design Guide publications, 2009 ASHRAE Fundamentals Handbook and in revised editions of ACCA Manual D.

SPEAKER:

Thomas Hartman, PE

BIOGRAPHY:

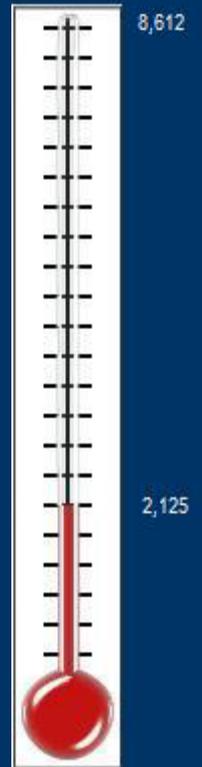
Thomas Hartman is Principal and the founder of The Hartman Company, a technology development and applications firm that works with designers, manufacturers and end users to apply emerging ultra-efficient HVAC and lighting technologies. Among the most notable of Mr. Hartman's developments have been the "Equal Marginal Performance Principle" and relational control concepts. These provide new approaches to integrating variable speed and other new HVAC/Lighting technologies with network controls for simpler, lower cost and better performing building comfort systems.

Tom Hartman holds a number of patents for advanced technologies and works worldwide with manufacturing and engineering partners to develop sound, cost effective products and designs that utilize these technologies for a wide variety of applications. In addition to the development of the Equal Marginal Performance Principle and relational control, Hartman has developed and works to apply a number of other indoor comfort enhancing technologies. Tom currently serves as an editorial advisor to *Heating, Piping and Air Conditioning Magazine* and the on-line publication, *automatedbuildings.com*. Tom is also a member of ASHRAE SSPC 55 and lectures and writes about comfort and energy issues for major symposiums and periodicals all over the world.

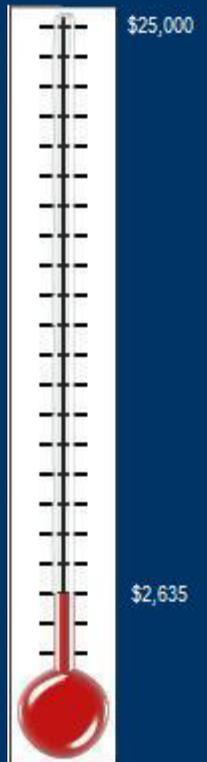
Presentation Outline:

Combining variable speed and digital network technologies provide new and exciting energy efficiency enhancing opportunities with what are called "relational control" techniques. Relational control employs the network capacity of modern DDC systems to operate each HVAC component in accordance with system requirements and in an optimal relationship to the current operation of all other system components. Relational control techniques offer dramatic improvements in energy efficiency, stability and system performance. This new family of control strategies represents a significant change from the stand alone nature of PID control that is still widely employed today. But this newer technology requires new industry process and

PAOE Points



RP Dollars



September Program/Speaker Bio. - Cont.

practices to achieve success in implementation. So when relational control techniques are applied to achieve ultra-efficient system performance, the process through which it is applied needs to be changed as well to be certain the technologies are adequately supported and end up operating as expected.

There are currently two primary categories of relational control as applied to HVAC systems. Demand based control, which is derived from the Equal Marginal Performance Principle, is employed to optimize the operation of systems that are composed of multiple power consuming components such as central systems. Intelligent iterative control is employed to improve the efficiency and performance of systems that distribute a resource such as heating, cooling or airflow to multiple zones.

This discussion will provide an introduction to these new relational control technologies and outline their advantages over current control practice. It will also discuss the application of these technologies to actual building systems and outline the types of changes in the design / construction / startup processes that are necessary to ensure applications of these newer technologies achieve the projected results.

Board of Governors Meeting Minutes

Attendees: 12 Members: Jay Martin, Ian Bost, Richard Watters, Dan Merkel, David James, Jay Sullivan, Cody Pace, Patty Parish, Tony Finch, Matt Carter, and Larry Akers.

Meeting Called to order at 10:36am by Jay Martin, Chapter President. Jay reported on PAOE status. The Chapter is 20% of the way to our goal. Jay would like Research Promotion to target raising 30% of our research goal by December.

Reports:

President-Elect (Ian Bost):

- On target with his MBOs. Has contacted 50% of the people targeted to be more active in the Chapter.
- No new members to sign-up yet.
- Researching a location for next year's meeting location.
 - Ridglea Country Club is large and has a variety of food. Meals are \$25 each.
 - Will contact the Fort Worth Club.

Secretary (Richard Watters):

- On target with his MBOs. Has contacted 40% of the people targeted to be more active in the Chapter and has members ready to participate.
- On target with getting a copy of the Roster online. Sponsor letters were sent, and we have received a good response.
- Jay asked for Roster Sponsors to be recognized in the margins of the website.
- Roster upload will wait for follow-up calls to those who have not replied.

Treasurer (Dan Merkel):

- Checking account balance is \$5,022.65.
- Has picked 10 members to contact to have a more active role in the Chapter.
- New nametags have been printed, and there should be a nametag for all Chapter members.
- Talked to The Petroleum Club about pricing of our meals. Stated they are \$15.25 per person + parking and fees. Total is about \$19.21 per person. Will clarify total, and that the Chapter is not penalized for more participation than RSVPs.

Board of Governors (David James): No report.

Board of Governors (W.O. Kelly): Not in Attendance.

Board of Governors (Cody Pace):

- The Chapter is doing a great job.

ByLaws Revision (John Rhodes): Not in Attendance.

CTTC (Tony Finch):

- Committee members have been set.

Board of Governors Meeting Minutes - Cont.

- Programs are set and itinerary has been sent to RVC
- Evaluations for previous meetings have been sent to RVC
- Tony is entering PAOE points online.
- He is working with Richard Long to organize a refrigeration tour.
- Ian has talked to Bret Privitt, who is interested in a Round Table discussion with the Chapter for one of the meeting topics.
- Two distinguished lecturers have been set up for this year.

Historian (Patty Parish):

- Working on finding new members.
- Will send information to Cody for website articles.
- Patty has been updating PAOE points online.
- She has been talking to old members to add to the Chapter History.

Honors & Awards (Larry Akers):

- Larry has updated the award list from last year's Roster and gave a copy to Richard for use in this year's Roster.
- Larry will update the award list as a "living" document.
- He is working on the paperwork to submit John Rhodes for a distinguished honors award. He needs a digital photo of John, and then the paperwork can be submitted.
- Larry is working on paperwork to submit Bittle for Fellow.

Membership Promotion (Brodie Heflin): Not in Attendance

- Jay Martin reported that delinquencies are down to 35%
- Call campaign will continue.
- There have been some issues with Society and their computer database not properly reflecting the renewal of Life Members. Everyone needs to be aware of this and please be patient and cautious when calling Life Members that may be on the delinquency list.

Research Promotion (David James):

- Committee has been formed. They will meet for lunch.
- Dan has sent last month's check for ASHRAE Research to David.
- Rick O'Connor received the coins from last year and will present them next month.
- David will follow-up with RVC for credits that are due for our Chapter.

Student Activities (Matt Carter):

- Committee has been assembled. They will meet next week.
- UTA and TCU branches are forming and we are reaching out to those students.
- Matt is working on a meeting with K-12 kids.
- Matt has attempted to contact his RVC on a couple of occasions and has not been able to talk with him.
- PAOE update: Matt needs the names of any interns that have worked for ASHRAE Member companies.
- A design camp and mentoring programs are in place.
- Matt has contacted students and is working with their schedules to meet with them.

Special Events (Jay Sullivan):

- Campaign is working well to get people signed up for the fall golf tournament.
- We have about 60 players now, three of whom were newly contacted and did not play in previous tournaments.
- Hole sponsorships are down this year.
- Jay has a list of events with tentative dates for the rest of the year.
- Jay asked Larry for help with planning a Sporting Clays event.
- Casino Night is being organized now.

Webmaster (Cody Pace):

- Website has been updated: programs are updated, special events are updated, and is working with Richard to build the Roster online.
- A mobile version of the website is active.
- History section has been updated.

Board of Governors Meeting Minutes - Cont.

- Research Promotion donors need to be updated.

Old Business:

- Roster publication will be delayed from release in September to solicit more sponsorship.
- 39 delinquencies, and about half of those are lifetime members. There is trouble with Society clearing the renewals.
- Joint meeting with BOMA next month. Meeting date will be moved to the **first Tuesday of the month**. We expect about 150 people to attend this meeting.

New Business:

- Cody Pace motioned that \$100 be donated by the Chapter to ASHRAE Research in honor of Ken Vantine, who passed away last May. Motion was seconded by David James, all were in favor, and the motion passed.

Other Items:

- A video will be played next month to highlight the Monterey, Mexico hosting of this year's CRC.
- There is no interest in a Cowboys Stadium Tour, since the Stadium personnel do not yet have themed tours. We would not be allowed to view mechanical rooms or the mechanical workings of the Stadium.
- Dan asked if it would be wise to move the CRC Checking Account to an interest bearing account, since it is intended for long-term savings. Dan will research available options further.
- Dan asked if we should consider increasing the lunch price to \$25 for those that do not pre-register online. This will be discussed next month.

Closing: President Jay Martin adjourned the meeting at 11:26am.

General Business Meeting Minutes

Meeting Called to order at 12:00pm by Jay Martin, Chapter President.

Proceeded with self-introductions and the introduction of our guests by Dan Merkel.

Old Business:

- Meeting minutes from last month's meeting were approved by motion.
- A little over 13% of our membership is delinquent on dues. Please check your status with Richard before you leave.
- Next month, we are having a joint meeting with BOMA on the first Tuesday of the month (11/03/09).
 - We are targeting distinguished lecturer, Hoy Bohanon, to discuss "Using the Retro-commissioning Process for Energy Savings." This topic was requested by BOMA.
 - We expect an attendance of about 150 people for this event.
 - We will target local government leaders to attend.
- PAOE points have been updated, and we are at 1,690 points.

New Business:

- Ken Vantine passed away last May. The Chapter will donate \$100 in his name to ASHRAE Research.
- The website has been updated; programs grid is current and will be updated to show all upcoming programs.
- UTA students from last year achieved honorable mention for their work on the senior design project.
- UTA team for this year kicked off their project at the beginning of September.
- TCU Student branch will be starting up in October.
- We have 5 new student members.
- October meeting will be Relational Control with Tom Hartmann, which will be a very interesting control theory for chilled water plants and systems.
- Jay Sullivan discussed the fall golf tournament. Please sign-up online or call Jay for information.

Technical Session Minutes:

Tony Finch introduced our speaker:

General Business Meeting Minutes - Cont.

Speaker: Chris VanRite, vice president with M & M

Program: Energy New Data on Air Flow Performance in Flexible Duct vs Round Sheet Metal Duct

Synopsis:

Chris VanRite gave an excellent discussion on new airflow values derived from research which was co-funded by the Air Distribution Institute, ASHRAE and TXU and conducted at Texas A&M University Energy Systems Laboratory. His discussion included:

- RP 1333 - Final report submitted last month.
- Airflow is important
 - Performance data presented
 - Building loads discussed.
- The Texas A&M University Energy Systems Lab did the work.
- Influenced by EnergyGuide
- The higher the SEER, it does not necessarily lead to more savings, but a better installation does lead to higher energy (cost) savings.
- 70% of installed residential systems were low on airflow
- Duct sealing is insufficient
- ASHRAE Fundamentals and ACCA Manual D are considered the Authority
- Photo discussion of current installations
- Current installations are not efficient
- Air Diffusion Council comments on flexible duct
 - flexibleduct.org - Free PDF download available.
- Reviewed new ductalators.

Closing: Jay Martin adjourned the meeting at 12:58pm.

Grassroots Committee Reports

Membership Promotion

We have made great strides on reducing our delinquencies; down from 75 to 35 as of this writing. Please check your membership status (if you haven't already done so) and make sure you are up to date. We hope that you find your membership with us to be worthwhile and if so, please mention us to others within the industry so that they might also join. It's a great benefit to us all if our organization grows. As always, write to me at brodie.heflin@jacobs.com if you know of anyone who would benefit from membership with us.

Thanks, Brodie Heflin

Chapter Financial Report

STARTING BALANCE DATE 9/1/2009
NEW BALANCE DATE 10/5/2009

Treasurer's Report

Dan Merkel

Meeting Information:

Date of Meeting: 9/16/2009
Members 61
Guests 5
Total: 66

Financial Data:

Starting Balance (9/1/09): \$ 4,721.65
Deposits:

September Luncheon Payments \$ 1,080.00
Individual Dues Paid - Mike Parker, Charles Crawford, Michael Smith \$ 105.00
August Dues \$ 665.00
ASHRAE 90.1 Seminar \$ 50.00

Subtotal: \$ 1,900.00

Payments:

ASHRAE Research \$ 45.00
US Hole in one insurance invoice 46882 \$ 199.00
ASHRAE Research - In memorium of Jim Bynum \$ 100.00
September Luncheon Payments and August parking \$ 1,270.30
UTA Student Members 5@\$16 \$ 80.00
ASHRAE Research - In memorium of Ken Vantine \$ 100.00

Subtotal: \$ 1,794.30

New Balance as of 10/5/09: \$ 4,827.35

**Note, this report does not include any results from the Golf Tournament.

Help Spread The Word About ASHRAE!



ASHRAE Winter Conference Jan 23-27

ASHRAE returns to Orlando January 23-27 for the Winter Conference and AHR EXPO. Your chapter can help promote the conference in your newsletters and on your web pages. Visit www.ashrae.org/orlandoresources and download additional information to help share the latest updates about the technical program, speakers, networking opportunities and more. Feel free to copy from the press release to use on your website and use the web ads to link to the official conference web page - www.ashrae.org/orlando.

Thanks in advance for sharing the news!



For more information on the 2010 Winter Conference, visit www.ashrae.org/orlando.

Questions? Comments? Send an email to orlandoconference@ashrae.org.

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Research Promotion	David James	(817) 921-5434	djames@haroldjames.com
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Upcoming Events

- Director and Regional Chairman for ASHRAE (Ken Fulk) will be visiting us in October and reporting on the activities of the Region and Society.
- ASHRAE FTW
 - all Sporting Clay Tournament (date TBD)
 - Tour of NEW Cowboy Stadium (hopefully)
 - Winter Party (January, 2009)
 - 2010 ASHRAE Winter Conference in Orlando Florida (January 23-27)
 - Don't forget CRC in April, 2009 (Monterrey, Mexico). You will need to get your passport early.
 - Spring Golf Tournament (date TBD)

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